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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,487	07/29/2003	Qun Sun	1861.1440001/JMC/DAK	5031

26111 7590 05/31/2005

STERNE, KESSLER, GOLDSTEIN & FOX PLLC  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT PAPER NUMBER

1624

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/628,487

Applicant(s)

SUN ET AL.

Examiner

Tamthom N. Truong

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-50 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                       |                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____                                                |

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

**Group 1:** Claims 1-11, 17-22, 26 and 27 drawn to a compound of formula I wherein:

X is -N= or -NH-;

R<sub>4</sub> is group (i);

classified in class 544, various subclasses depending on substituents.

**Group 2:** Claims 1-5, 12-22, 26 and 27, drawn to a compound of formula I wherein:

X is -N= or -NH-;

R<sub>4</sub> is group (ii);

classified in class 544, various subclasses depending on substituents.

**Group 3:** Claims 1-5, 17 and 20, drawn to a compound of formula I wherein:

X is -N= or -NH-;

R<sub>4</sub> is group (iii);

classified in class 544, various subclasses depending on substituents.

**Group 4:** Claims 1-5, 17 and 20, drawn to a compound of formula I wherein:

X is -N= or -NH-;

R<sub>4</sub> is group (iv);

classified in class 544, various subclasses depending on substituents.

**Group 5:** Claims 1-5, 17 and 20, drawn to a compound of formula I wherein:

X is -N= or -NH-;

R<sub>4</sub> is group (v);

classified in class 544, various subclasses depending on substituents.

**Group 6:** Claims 1-5, 23-25, 26 and 27 drawn to a compound of formula I wherein:

X is -S-;

R<sub>4</sub> is group (i);

classified in class 544, various subclasses depending on substituents.

**Group 7:** Claims 1-5, 23-25, 26 and 27, drawn to a compound of formula I wherein:

X is -S-;

R<sub>4</sub> is group (ii);

classified in class 544, various subclasses depending on substituents.

**Group 8:** Claims 1-5, 23 and 27, drawn to a compound of formula I wherein:

X is -S-;

R<sub>4</sub> is group (iii);

classified in class 544, various subclasses depending on substituents.

**Group 9:** Claims 1-5, 23 and 27, drawn to a compound of formula I wherein:

X is -S-;

R<sub>4</sub> is group (iv);

classified in class 544, various subclasses depending on substituents.

**Group 10:** Claims 1-5, 23 and 27, drawn to a compound of formula I wherein:

X is -S-;

R<sub>4</sub> is group (v);

classified in class 544, various subclasses depending on substituents.

**Group 11:** Claim 28, drawn to a method of making a compound of formula I wherein X is -NH-; classified in class 544, various subclasses depending on substituents.

**Group 12:** Claim 29, drawn to a method of making a compound of formula I wherein X is -N=; classified in class 544, various subclasses depending on substituents.

**Group 13:** Claim 28, drawn to a method of making a compound of formula I wherein X is -S-; classified in class 544, various subclasses depending on substituents.

**Group 14:** Claims 31-50 a method of treating a disorder responsive to blockage of sodium channels, and various other disorders such as: neuronal damage, chronic pain, neuropathic pain, convulsions, etc.; classified in class 514, various subclasses depending on substituents. Further restriction will be required if this group is elected.

The inventions are distinct, each from the other because of the following reasons:

Inventions of groups 1 and 14 are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are patentably distinct by the combination of X and R<sub>4</sub>.

Although Groups 1-5 share a core of *4-oxo (or 4-thio) -quinazoline*, or -*tetrahydroquinazoline*, such a core is well known, and does not contribute to the pharmaceutical art as well as does not sufficiently define the invention. Therefore, it is the groups represented by R<sub>4</sub> that give the compounds in each group their unique physical, and chemical properties as

well as biological activity. Likewise, groups 6-10 share a core of *2,3-dihydrobenzo-1,3-thiazine*, but they differ from each other by a group represented by R<sub>4</sub>. Thus, a reference anticipated or rendered obvious compounds of one group would not do so to those of the other groups.

The inventions of Groups 11-13 are drawn to different methods of making formula I depending on what X is. Because each process has different starting materials, a reference reading on one process would not do so to the others. Therefore, additional search is required.

The invention of Group 14 is drawn to a method of treating various disorders, which can be treated by different compounds as well. A reference reading on compounds of formula I would not necessarily read on the method of treatment. Therefore, additional search is required.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, and to search the 14 distinct inventions would indeed impose a serious burden upon the examiner in charge of this invention, restriction for examination purposes as indicated is proper.

Due to the complexity of the grouping, the restriction is presented in writing. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

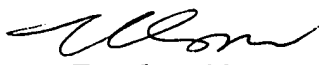
Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M-F (10:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Tamthom N. Truong**  
**Examiner**  
**Art Unit 1624**

\*\*\*

5-18-05

  
**JAMES O. WILSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**